

Integrated Water Resource Mgt – a Federal Perspective

Civil Works at a Strategic Crossroads

Paul J Robershotte

Special Advisor to the Commander

Integrated Water Resources

South Pacific Division

U.S. Army Corps of Engineers

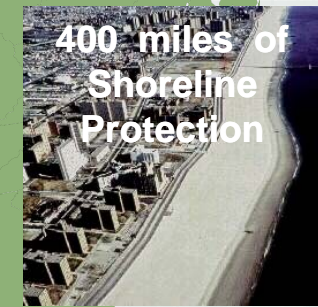
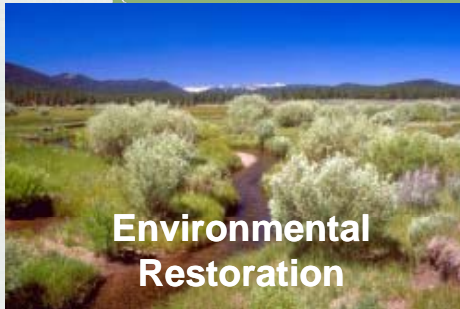
27 October 2011



US Army Corps of Engineers
BUILDING STRONG®



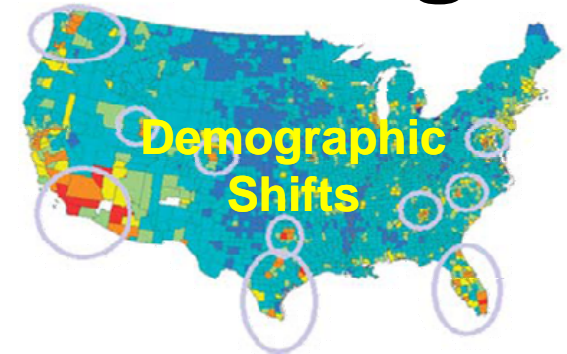
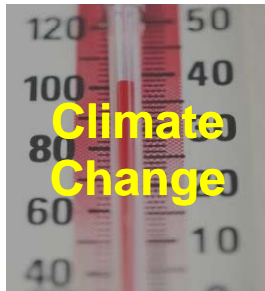
Civil Works Value to the Nation



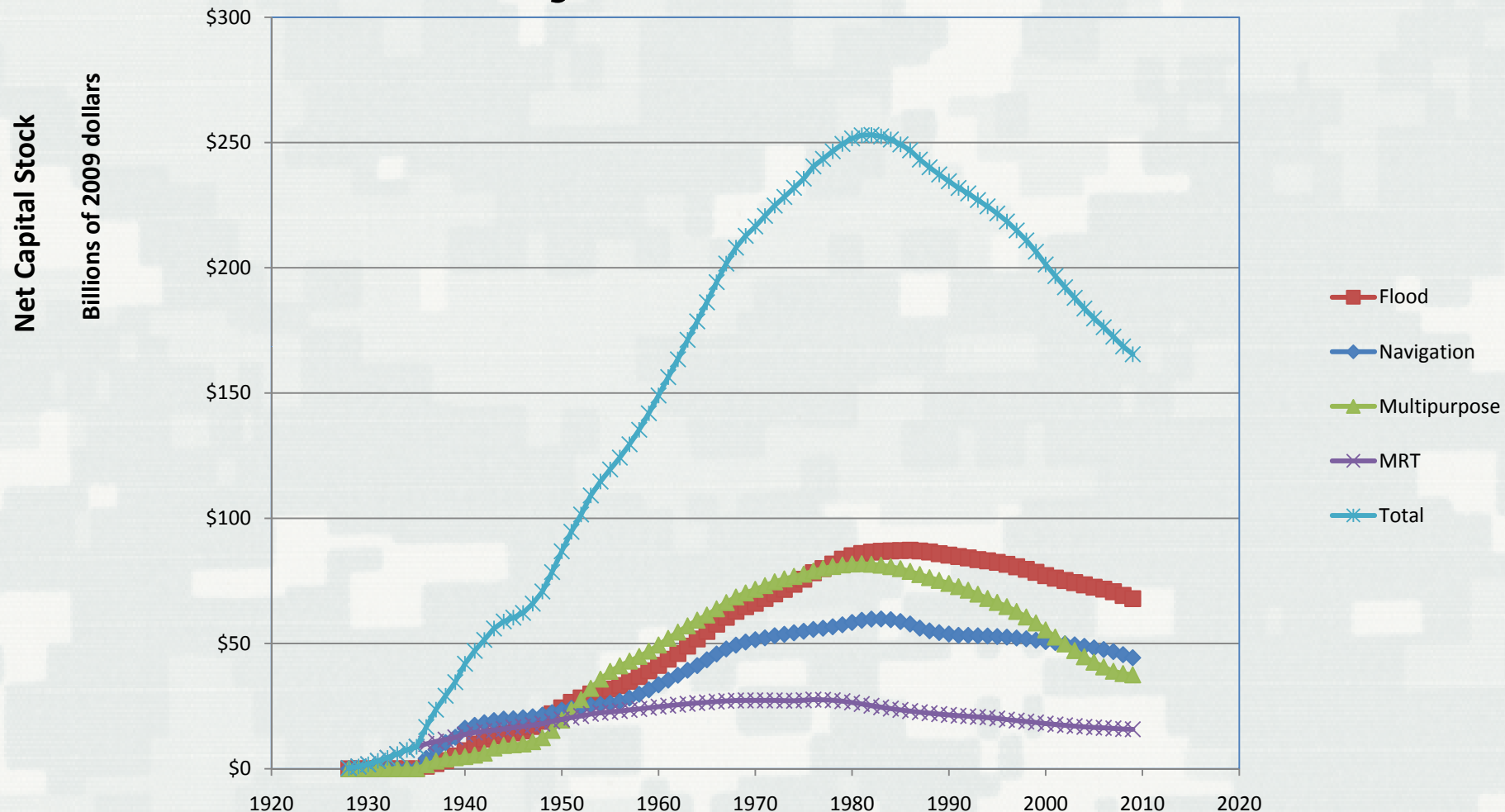
- US Ports and Waterways convey >2B Tons of Commerce
- Foreign Trade alone creates >\$160 B in Tax Revenues



National Water Resource Challenges



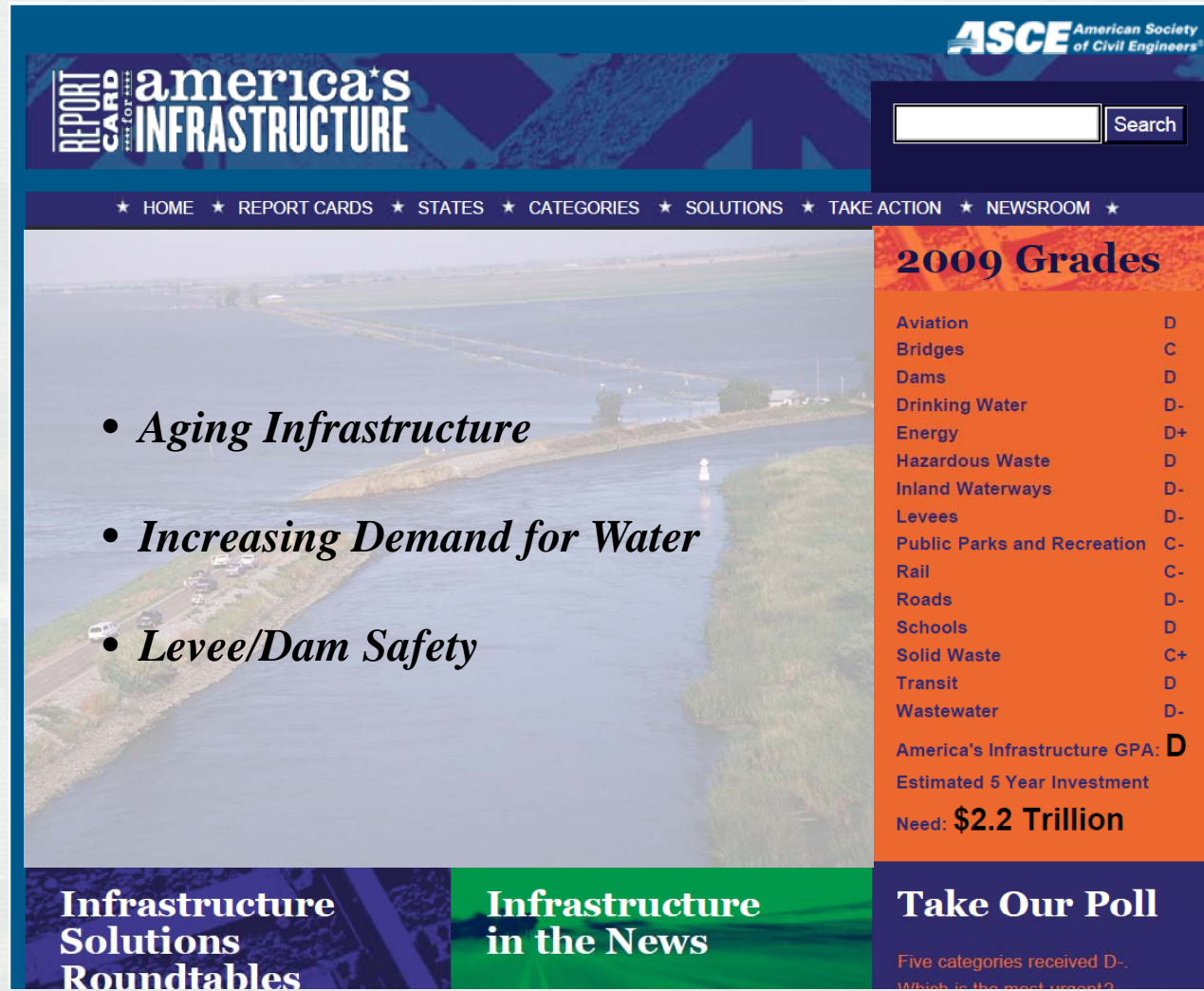
Net Capital Stock Estimates of Corps Civil Works Projects, 1928-2009 (in 2009 \$)



The value of the Corps CW's capital stock portfolio has declined from a peak value of ~ \$250 billion in 1983, to ~ \$165 billion today, as new investment & maintenance have not kept pace with depreciation.



Challenging Times For America's Infrastructure



REPORT CARD **america's INFRASTRUCTURE**

ASCE American Society of Civil Engineers

★ HOME ★ REPORT CARDS ★ STATES ★ CATEGORIES ★ SOLUTIONS ★ TAKE ACTION ★ NEWSROOM ★

- *Aging Infrastructure*
- *Increasing Demand for Water*
- *Levee/Dam Safety*

2009 Grades

Aviation	D
Bridges	C
Dams	D
Drinking Water	D-
Energy	D+
Hazardous Waste	D
Inland Waterways	D-
Levees	D-
Public Parks and Recreation	C-
Rail	C-
Roads	D-
Schools	D
Solid Waste	C+
Transit	D
Wastewater	D-

America's Infrastructure GPA: **D**

Estimated 5 Year Investment Need: **\$2.2 Trillion**

Infrastructure Solutions Roundtables

Infrastructure in the News

Take Our Poll

Five categories received D-. Which is the most urgent?



Water Resources Objectives

- **Protect, develop and restore the Nation's water and related land resources¹**
- **Operate and maintain existing Corps projects¹**
- **Train and prepare for emergency response needs¹**
- **Improve energy, water, and petroleum efficiency²**
- **Double exports from FY2010 to FY2015³**

¹FY2011 CW Press Book Preface

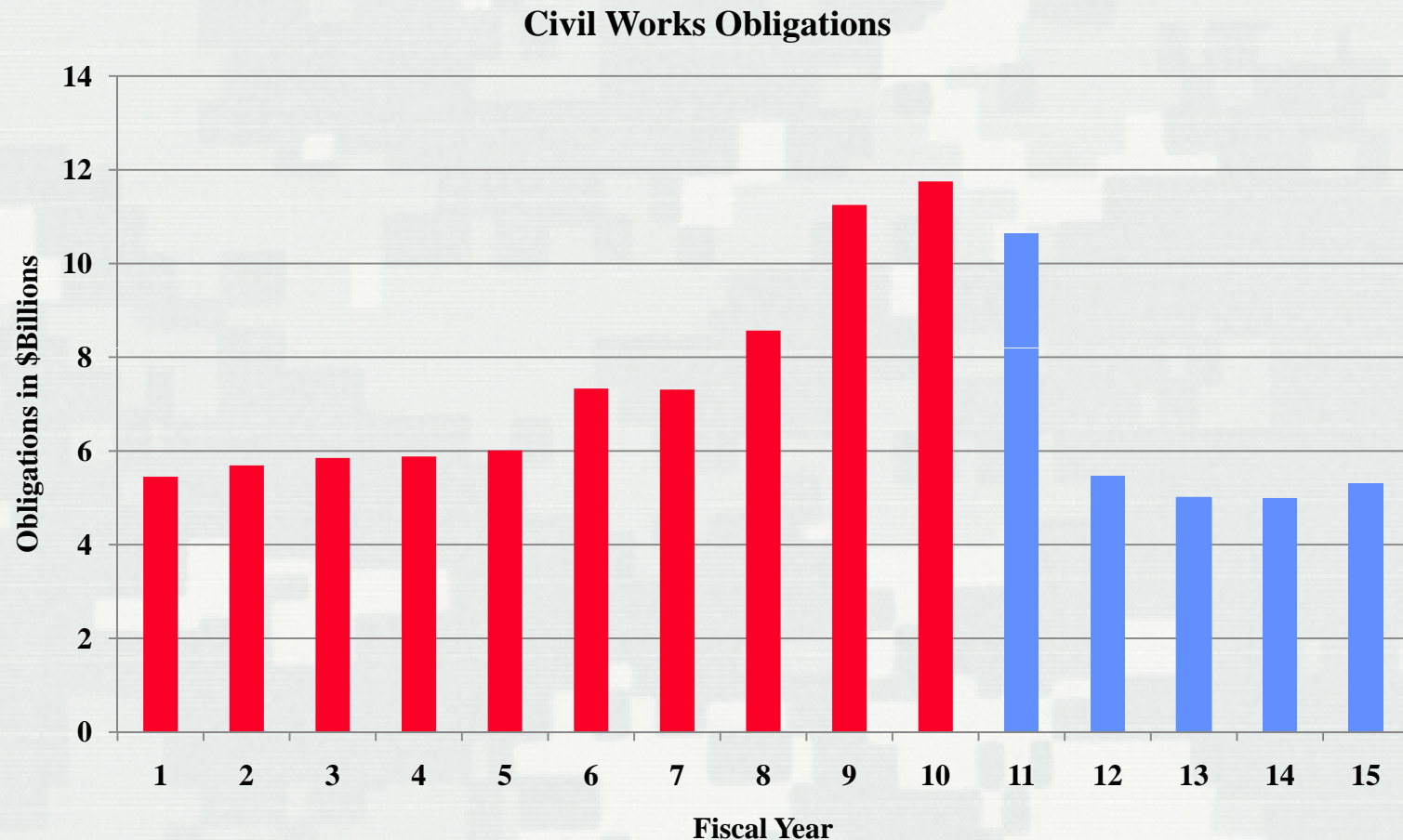
²Executive Order 13514 - Federal Leadership in Environmental, Energy, and Economic Performance

³President's 2011 State of the Union Address

NOTE: This is a listing of objectives, not a ranking.



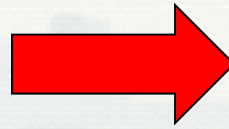
Historical & Projected Obligations



NOTE: Approximately \$7 billion carryover from FY10 to FY11 maintains high workload in FY11. Then, barring additional Emergency Supplemental Appropriations workload decreases substantially in FY12 and beyond



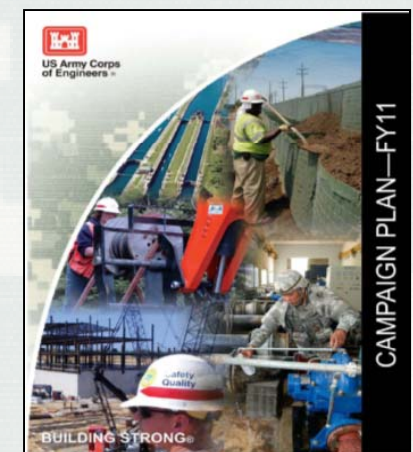
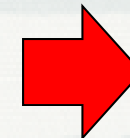
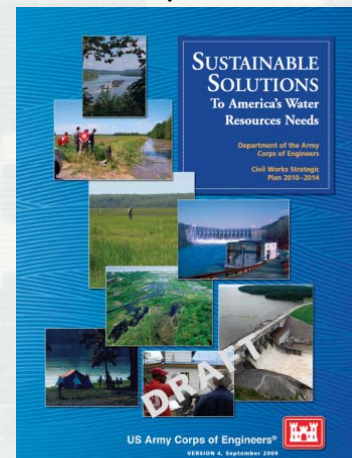
Challenges



Strategies

- *Constrained Budgets*
- *Aging Infrastructure*
- *Disaster Preparedness and Response*
- *Increasing Demand for Water*
- *Long Term Recovery*
- *Climate Change*
- *Environmental Values*
- *Declining Biodiversity*
- *Demographic Shifts*
- *Globalization*
- *8 +2 Ecosystem Restoration Sites*
- *Principles & Guidelines*
- *Levee/Dam Safety*

- **Integrated Water Resource Management**
- **Systems – Based Approach**
- **Risk-Informed Decision Making & Communication**
- **Collaboration & Partnering**
- **Asset Management**
- **State-of-the Art Technology**





US Army Corps of Engineers
BUILDING STRONG®

USACE Campaign Plan

What will WE do to make our infrastructure great?

USACE Vision

A GREAT engineering force of highly disciplined people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the Nation's engineering challenges.

USACE Mission

Provide vital public engineering services in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters.

GREAT is

- Delivering superior performance.
- Setting the standard for the profession.
- Making a positive impact on the Nation and other nations.
- Being built to last by having a strong "bench" of educated, trained, competent, experienced, and certified professionals.

Goal 1

Deliver USACE support to combat, stability and disaster operations through forward deployed and reach back capabilities.

Objective 1a:

Ready, responsive and reliable.

Objective 1b:

Support the Operating and Generating Force.

Objective 1c:

Establish human resources and family support programs that promote readiness and quality of life.

Objective 1d:

Institutionalize USACE capabilities in interagency policy and doctrine.

Goal 2

Deliver enduring and essential water resource solutions through collaboration with partners and stakeholders.

Objective 2a:

Deliver integrated, sustainable, water resources solutions.

Objective 2b:

Implement collaborative approaches to effectively solve water resource problems.

Objective 2c:

Implement streamlined and transparent regulatory processes to sustain aquatic resources.

Objective 2d:

Enable Gulf Coast recovery.

Goal 3

Deliver innovative, resilient, sustainable solutions to the Armed Forces and the Nation.

Objective 3a:

Deliver sustainable infrastructure via consistent and effective military construction & real estate support to customers.

Objective 3b:

Improve protection, resilience and lifecycle investment in critical infrastructure.

Objective 3c:

Deliver reliable infrastructure using a risk-informed asset management strategy.

Objective 3d:

Develop and apply innovative approaches to delivering quality infrastructure.

Goal 4

Build and cultivate a competent, disciplined, and resilient team equipped to deliver high quality solutions.

Objective 4a:

Identify, develop, maintain, and strengthen technical competencies.

Objective 4b:

Communicate strategically and transparently.

Objective 4c:

Standardize business processes.

Objective 4d:

Establish tools and systems to get the right people in the right jobs, then develop and retain this highly skilled workforce.

Priorities

USACE Establishing National Programs

• **Dam Safety Program**

- Portfolio screening to determine highest risk
- Targeted funding for remediation planning at high risk facilities
- Develop Interim Risk Reduction Measures

• **Levee Safety Program**

- Under development
- Modeled on Dam Safety Program
- Ongoing partner and stakeholder engagement

• **Asset Management Prioritization**

- Goal: Operational risk assessments to inform budgets
- Modeled on Inland Navigation
- Pilots include flood risk and coastal



Prioritization:

The New Budgeting Paradigm

—Budget Development Guiding Principles

- Align with National goals, priorities & objectives
- Finish projects we start
- Focus on core missions
- Provide efficient funding stream (results in fewer projects)

National Priorities/Goals

- Reduce the Deficit¹
- Create Jobs and Restore Economy¹
- Improve Infrastructure¹
- Restore and Protect the Environment¹
- Maintain Global Competitiveness²
- Increase Energy Independence²
- Improve Quality of Life²



¹ FY2011 CW Budget Briefings to OMB
² President's 2011 State of the Union Address
NOTE: listing of priorities/goals, not ranking.

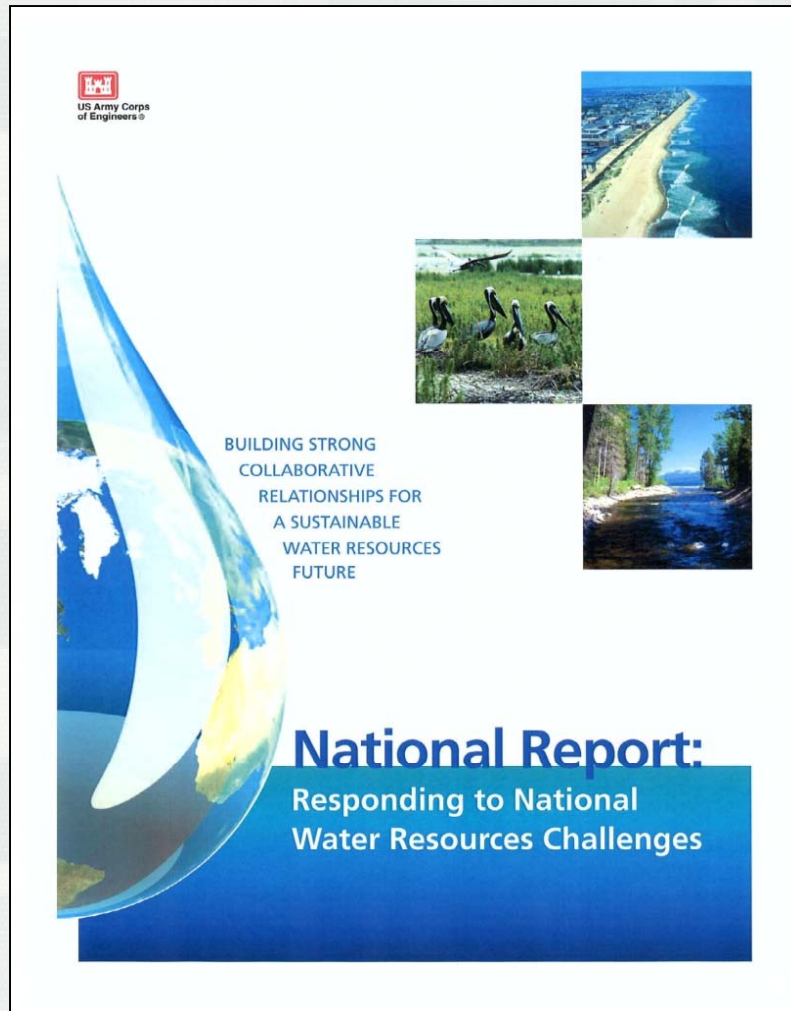


6

BUILDING STRONG®



Approach to a More Sustainable Water Future



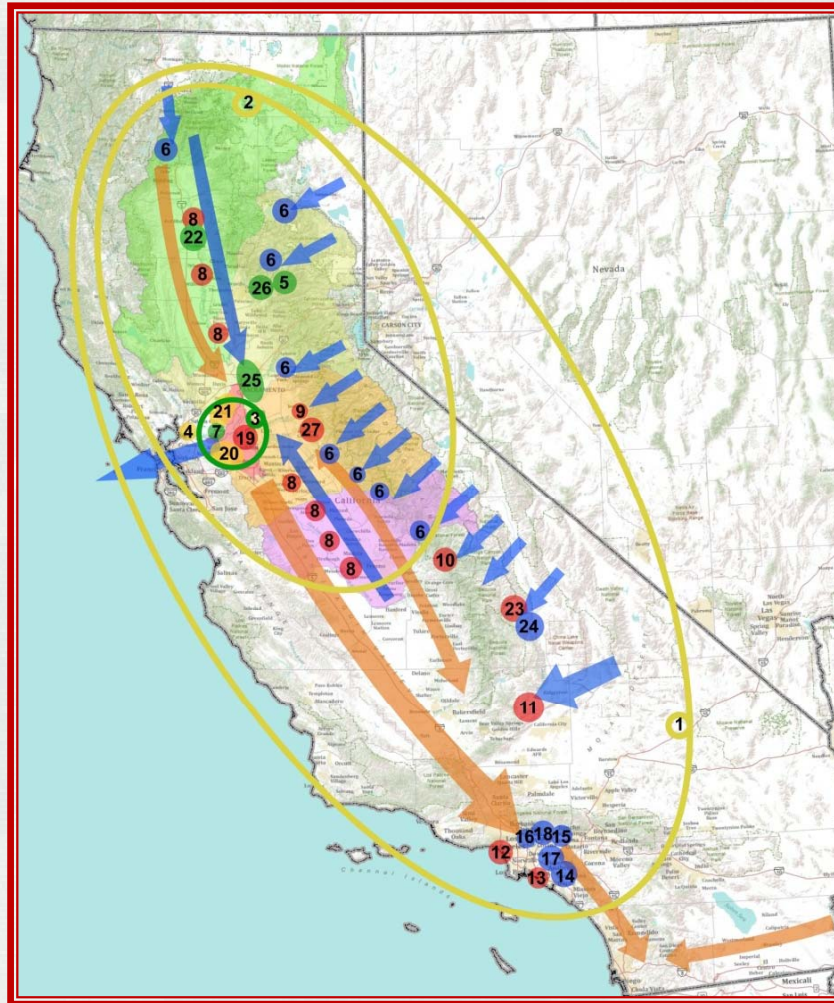
- 1) Integrated Water Resources Management
- 2) Governance and Management
- 3) Future National Water Resources Direction
- 4) Collaboration
- 5) Water Resources Investment Strategies
- 6) Managing Extreme Events
- 7) Knowledge & Technology Transfer
- 8) Water Resources Leadership
- 9) Communications and Education



Prioritization:

CA Bay-Delta IRWM System

An Integrated Approach to Bay Delta Projects



Priority Initiatives that, in combination, significantly improve—

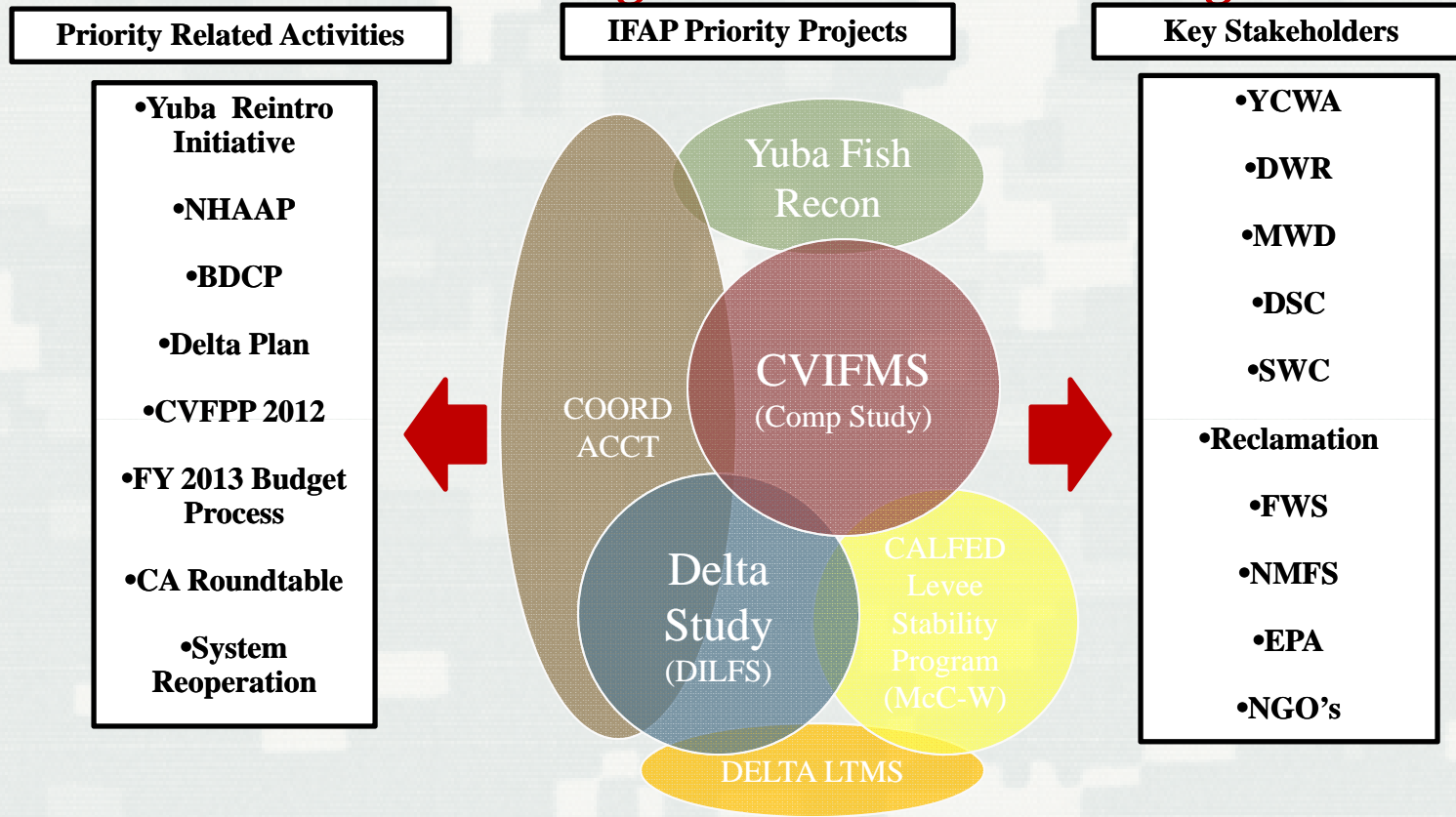
- Flood Risk Management
- Ecosystem
- Water Supply
- Reservoir Operations
- Navigation
- Water Conservation
- Recreation

Key:

Blue Arrows – Natural Flow Paths
Orange Arrows – Conveyance Systems
Yellow Dots – Navigation BL or Other
Green Dots – Ecosystem BL
Red Dots – Flood Damage Reduction BL
Blue Dots – Reservoir Operations/O&M

CA BAY-Delta IRWM System Program

FY 2013 Strategic Priorities & Leverage



Key Questions:

- How do we integrate project activities better with Key Stakeholders & Related Activities?
- How do we optimize multiple IWRM benefits with current Business Line budgeting?
- How do we better link ASA to HQ to SPD to SPK to PM for these key priority projects?
- How do we advance coordinated / federal interagency budgeting?



Way Ahead

CHALLENGES

1. Project-centric focus
2. Restrictive project benefits
3. Business Line budget criteria
4. Federal Coordination

OPPORTUNITIES

1. Establish system-based programmatic IWRM framework
2. Broaden interpretation of Authorities
3. Pursue programmatic funding
4. Fund Agencies for coordinated project execution



“This MOU establishes a structure for coordinating and streamlining the actions of the federal agencies... to facilitate coordination and cooperation among these agencies in advancing the federal commitment to the Bay-Delta.” – Federal

MOU Sep 2009

